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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,787	07/26/2000	James A. Schwindeman	208-6152	7855

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EXAMINER
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MULLIS, JEFFREY C

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 03/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/625,787	SCHWINDEMAN ET AL.	
	Examiner	Art Unit	
	Jeffrey C. Mullis	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) 4,7,8,10-14,16,19-23,26,29,30 and 32-90 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,9,15,17,18,24,25,27,28,31,91 and 92 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Applicant's election with traverse of Group I and the species of claims 91 and 92 in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the groups are sufficiently few in number so that it is not unduly burdensome upon the Examiner to search the groups as a whole. This is not found persuasive because the search for the species represented by the various groups is not co-extensive.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-3, 5, 6, 9, 15, 17, 18, 24, 25, 27, 28, 31, 91 and 92 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

The absolute number of diene units in applicants' initiator is ambiguous since the instant claims recite that Q is "one or more diene hydrocarbons" and that N is between 0 and 1 non-inclusively. This renders the claims ambiguous since any number of diene units may be viewed as being acceptable depending on how many units of diene Q embraces. For instance, it is not clear if an initiator with 10 isoprene units is embraced by the instant claims in that such a species could be viewed as embracing applicants' structure when Q was 20 isoprene units and n was 1/2. Furthermore the structure Z embraces units such as the unit "Q".

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For instance it is not clear how a structure with two isoprene units should be viewed, i.e. such a structure could variously be viewed as having one isoprene unit as part of Q and another one as part of Z.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 6, 9, 15, 17, 18, 24, 25, 27, 28, 31, 91 and 92 are rejected under 35 U.S.C. § 102(b) as being anticipated by Engel et al. (USP 5,527,753), cited by applicants.

Note the Abstract as well as column 4 lines 36-50 of Engel et al. who discloses that the amount of diene hydrocarbon in the initiator shown in the Abstract may be as little as "about" 1

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mole per organolithium compound. Since the term "about" includes amounts slightly lower than 1, applicants' claims are anticipated by the reference. It is noted that the species disclosed by Engel is non-elected. However since this reference was available, it has been relied upon to accelerate prosecution.

Claims 1-3, 5, 6, 9, 15, 17, 18, 24, 25, 27, 28, 31, 91 and 92 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schwindeman et al. (USP 5,565,526), cited by applicants.

Note Schwindeman's Example 1 where applicants' elected species is disclosed in which applicants' group Q is equal to 4 diene hydrocarbons i.e. 4 isoprenes and in which n equals 1/2. Alternatively the species of Example 1 can be viewed as being embraced by applicants' elected species when applicants' group C is equal to 1 1/2 isoprene units and 3 methylene units and in which applicants' group Q<sub>n</sub> is equal to half of an isoprene unit.

As set out in the above rejection, applicants' claims are ambiguous and perhaps applicants' claims do not embrace species containing 1 or greater isoprene units. However use of very slightly less than 1 isoprene unit in Schwindeman et al. would have been obvious to a practitioner having ordinary skill in the art at the time of the invention in that substantially the same results would be assumed upon varying the amount of isoprene very slightly and in the expectation of adequate results and further

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motivated by the benefit of saving on isoprene absent any showing of surprising or unexpected results.

Claims 1-3, 5, 6, 9, 15, 17, 18, 24, 25, 27, 28, 31, 91 and 92 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Letchford et al. (WO 97/05173).

Letchford et al. disclose an initiator identical to that of applicants at the paragraph bridging pages 8 and 9 containing a moiety "R" derived from a diene such as isoprene at page 9 line 16. Applicants'  $n$  is between 0 and 1 non-inclusively and patentees' is 0 to 5 and applicants' and patentees' range of  $n$  therefore overlaps but in any case applicants'  $Q$  may be any number of isoprene units i.e. "one or more conjugated diene hydrocarbons" as recited by claim 1 of the application and thus patentees' and applicants' elected species may be the same even when patentees' initiator contains 5 isoprene units, i.e. applicants'  $Q$  equals 10 isoprene units and applicants'  $n$  equal to  $1/2$ . Alternatively applicants'  $Z$  may be equal to  $4 \frac{1}{2}$  isoprene units and applicants'  $n$  equal to  $1/2$ .

Arguably applicants do not intend that more than one isoprene unit is present in their initiator, but in any case patentees clearly disclose that  $n$  may be between 0 and 5 and therefore includes all numbers between 0 and 1. Therefore choice of numbers between 0 and 1 non-inclusively would have been

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obvious to a practitioner having ordinary skill in the art at the time of the invention in the expectation of adequate results absent any showing of surprising or unexpected results.

The Examiner believes that applicant Schwindeman coauthored an article regarding ether functionalized alkyl lithium initiators in Journal Polym. Prepr. 1999 40(2) on pages 786-787 thereof. If this article is not pertinent to patentability, of course it need not be submitted. If it is pertinent, applicants should submit the article on an Information Disclosure Statement.

Any inquiry concerning this communication should be directed to Jeffrey Mullis at telephone number (703) 308-2820.

J. Mullis:cdc

March 21, 2002

Jeffrey Mullis  
Primary Examiner  
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